

# Sierra Leone *Prinia Schistolais leontica* in the Fouta Djalon of Guinea, its song, distribution and taxonomic status

C. R. Barlow<sup>a</sup>, R. B. Payne<sup>b</sup>, L. L. Payne<sup>b</sup> and M. D. Sorenson<sup>c</sup>

**Prinia de Sierra Leone *Schistolais leontica* dans le Fouta Djalon, Guinée, son chant, sa distribution et son statut taxonomique.** Un couple de Prinias de Sierra Leone *Schistolais leontica* a été observé le 10 octobre 1999 près de Dalaba, dans le Fouta Djalon, Guinée (11°40'N 12°17'W). Un des oiseaux, qui a pu être capturé, avait une becquée d'insectes et présentait une plaque incubatrice. Ceci constitue une extension considérable vers l'ouest de l'aire de répartition de cette espèce menacée, ainsi que la première donnée de nidification. Un sonogramme du chant est présenté et comparé à celui de la Prinia à gorge blanche *S. leucopogon*, espèce présentant un comportement et un chant en duo semblables. Les différences vocales et génétiques prouvent toutefois qu'il s'agit bien de deux espèces distinctes.

On 10 October 1999 we observed a pair of small grey warblers at the edge of a village c.1 km north-west of Dalaba, Guinea, at 1,160 m (11°40'N 12°17'W), which we identified as Sierra Leone (White-eyed) Prinias *Schistolais leontica*. The birds had a long tail and rounded wings, a whitish belly, distinctly buff flanks, a thin black bill, relatively long pink legs, and a cream-white iris (Figs. 2–3). They occurred together in thickets near a trail and stream by the edge of forest; they did not enter the forest (Fig. 1). One bird was carrying insects and, when captured, was found to have an active brood patch. Its tail was bent to one side, indicating it was attending a covered nest

which was not found. When moving through the vegetation, the birds held the tail low, not cocked over the back; the two species of *Schistolais* war-

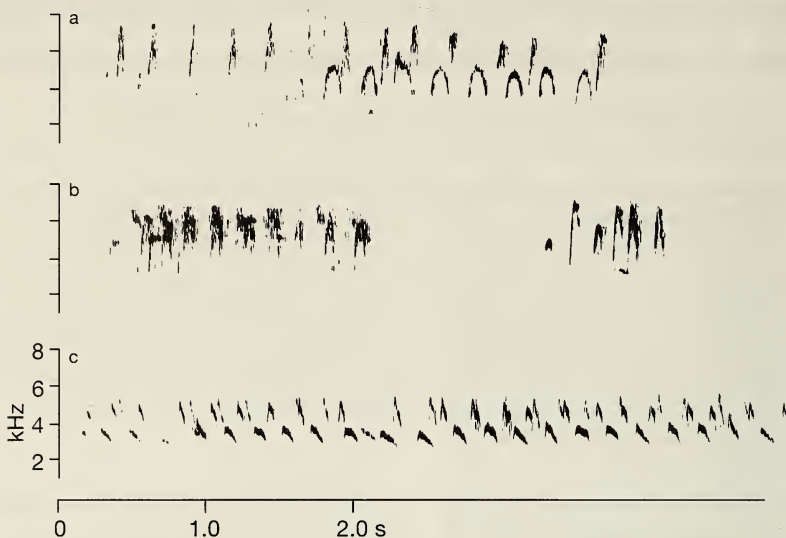


**Figure 1.** Habitat within 10 m of Sierra Leone Prinia *Schistolais leontica* near Dalaba, Guinea, with dense thickets, rocky outcrops and disturbed forest (Laura Payne)

Habitat situé à 10 m de la Prinia de Sierra Leone *Schistolais leontica* près de Dalaba, Guinée, avec des bosquets denses, des affleurements rocheux et de la forêt dégradée (Laura Payne)

**Figures 2–3.** Sierra Leone Prinia *Schistolais leontica* near Dalaba, Guinea, 10 October 1999 (Laura Payne)

Prinia de Sierra Leone *Schistolais leontica* près de Dalaba, Guinée, 10 octobre 1999 (Laura Payne)



**Figure 4.** Sonograms of Sierra Leone *Prinia Schistolais leontica* and White-throated *Prinia S. leucopogon*. **A:** song of Sierra Leone *Prinia* at Dalaba, Guinea (original recording by CB on Sony TC-D5M recorder with Beyer M69 microphone in 33 cm parabola); **B:** song of Sierra Leone *Prinia* at Mt Nimba, Liberia (Chappuis 2000); **C:** song of White-throated *Prinia* at Garoua Boulai, Cameroon (Chappuis 2000). Sonograms generated with Kay Electrics DSP Sona-Graph 5500 and Printer 5509, at 234 Hz.

Sonogrammes de la *Prinia* de Sierra Leone *Schistolais leontica* et la *Prinia* à gorge blanche *S. leucopogon*. **A:** chant de la *Prinia* de Sierra Leone à Dalaba, Guinée (enregistrement original par CB avec un enregistreur Sony TC-D5M et un microphone Beyer M69 dans une parabole de 33 cm); **B:** chant de la *Prinia* de Sierra Leone au Mont Nimba, Liberia (Chappuis 2000); **C:** chant de la *Prinia* à gorge blanche à Garoua Boulai, Cameroun (Chappuis 2000). Sonogrammes réalisés avec Kay Electrics DSP Sona-Graph 5500 et imprimante 5509, à 234 Hz.

blers, *S. leontica* and White-chinned *Prinia S. leucopogon*, differ in this behaviour from warblers in the genus *Prinia* (Irwin 1997). Although Bates (1931) described *S. leontica* 'cocking their tails', Irwin (1997) suggests *Schistolais* simply raise the tail over the back.

The birds sang both singly and together. The vocalisations were recorded and sonograms are presented here for the first time (Fig. 4a). When duetting, they uttered their notes at different rhythms, and the notes of the two birds were not closely synchronised. The songs recorded at Mt Nimba, Liberia, by Stuart Keith, were described as 'a tuneless, unstructured, unsynchronized duet; one bird gives rapid, high-pitched 'sipsipsip...' and the second bird gives a lower, nasal, measured 'bur-bur-bur...'' (Irwin 1997). Two of the three songs on Chappuis (2000) show the same phrasing and sequence of notes, so there is some

repeated structure in the song (Fig. 4b). Songs at Mt Nimba and Dalaba were similar, and it appears these songs are species-typical. Song duets of Sierra Leone *Prinia* differ from those of its congener, the Central African White-chinned *Prinia*, whose notes are lower pitched (the short notes 5 vs. 7 kHz; the long notes 3–4 kHz vs. 4–5 kHz), and have a narrower frequency envelope (the short notes 1.0–1.5 kHz vs. 3–4 kHz; the long notes 1 kHz vs. w kHz) (Fig. 4c). The irregular sequence of the higher pitched notes in Fig. 4 show that two birds independently gave the notes each at a different rhythm, and neither bird was in tight synchrony with the rhythm of a third bird with the lower, longer notes. Another recording from Fouban, Cameroon (Chappuis 2000), indicates two birds giving the lower notes at different rhythms, and a third bird giving the high notes at a third rhythm.

White (1962) considered Sierra Leone and White-chinned Prinias to be the same species, as did Morel & Morel (1988) when listing '*leucopogon*' for Guinea. However, the two differ in size (*leontica* being smaller) and appearance (Irwin 1997), and their songs are distinct. In molecular genetic analyses, the two *Schistolais* are more closely related to the genera *Camaroptera* and *Apalis* than to *Prinia subflava* and *Cisticola* spp. (Sefc *et al.* 2003). The genetic sequences of their mitochondrial ND2 gene are c.4% divergent (Sefc *et al.* 2003), reflecting a historical divergence of perhaps two million years for the two species. The warbler lineages *Schistolais* and *Apalis*, *Prinia* and *Cisticola* are included in the family Cisticolidae in Sibley & Monroe (1990), Sefc *et al.* (2003) and Dickinson (2004). Although Urban *et al.* (1997) included all within the family Sylviidae, recent genetic analyses suggest this assemblage, were it monophyletic, would include certain babblers and white-eyes *Zosterops* as well (Cibois *et al.* 1999, Sefc *et al.* 2003, Barker *et al.* 2004). *Schistolais* and many *Apalis* sing in duet. In contrast, most warblers of the genus *Prinia*, such as *P. subflava*, sing alone rather than in duet (Irwin 1997), although Banded *Prinia P. bairdii* regularly duets (Brosset & Erard 1986). Duetting behaviour in songbirds is involved in maintaining an exclusive pair-bond, and the distribution of duetting song tends to follow systematic relatedness rather than certain habitats (Payne 1971, Farabaugh 1982, Smith 1994, Langmore 1998, Slater *et al.* 2002).

The observation at Dalaba constitutes a considerable range extension and also the first breeding record of this globally threatened species, which is categorised as Vulnerable (Irwin 1997, BirdLife International 2004). Considered 'very local and uncommon' (Irwin 1997), its previously known range included north-east Sierra Leone, south-east Guinea (Pic de Fon and Mt Nimba), northern Liberia (Mt Nimba and other ranges in northern Nimba county) and western Côte d'Ivoire (Bates 1930, 1931, Colston & Curry-Lindahl 1986, Gatter 1997, Irwin 1997, Demey & Rainey 2004). Pic de Fon (08°31'N 08°54'W) is c.500 km from Dalaba; Birwa Peak, in the Tingi Mountains, Sierra Leone (08°54'N 10°48'W), from where the species first was described (Bates 1930), is 339 km distant. Bates (1931) also collected it near Saiama, in southern Guinea just

across the Sierra Leone border. The species' range coincides with the inland massifs and an annual rainfall of 2,000–2,600 mm (Gwynne-Jones *et al.* 1978, Gatter 1997). Dalaba lies on the rugged, rocky massif of the Fouta Djallon, which extends as an inland plateau through western Guinea south into north-east Sierra Leone. The habitat of wet thickets and patches of secondary forest among granitic outcrops, ravines and ridges, of which we only briefly sampled a small area around Dalaba during our visit in October 1999, occurs throughout the Fouta Djallon and the species may well occur elsewhere in the region.

## References

- Bates, G. L. 1930. [New birds from West Africa.] *Bull. Br. Ornithol. Cl.* 51: 47–54.
- Bates, G. L. 1931. Account of an expedition to Sierra Leone and French Guinea on behalf of the British Museum. *Ibis* 1931: 446–466.
- BirdLife International. 2004. *Threatened Birds of the World 2004*. CD-ROM. Cambridge, UK: BirdLife International.
- Brosset, A. & Erard, C. 1986. *Les oiseaux des régions forestières du nord-est du Gabon*. Vol. 1. Paris: Société Nationale de Protection de la Nature.
- Chappuis, C. 2000. *African Bird Sounds: Birds of North, West and Central Africa and Neighbouring Atlantic Islands*. 15 CDs. Paris: Société d'Études Ornithologiques de France & London, UK: British Library National Sound Archive.
- Cibois, A., Pasquet, E. & Schulenberg, T. S. 1999. Molecular systematics of the Malagasy babblers (Passeriformes: Timaliidae) and warblers (Passeriformes: Sylviidae), based on cytochrome *b* and 16S rRNA sequences. *Mol. Phyl. & Evol.* 13: 581–595.
- Colston, P. R. & Curry-Lindahl, K. 1986. *The Birds of Mount Nimba, Liberia*. London, UK: Br. Mus. (Nat. Hist.).
- Demey, R. & Rainey, H. J. 2004. The birds of Pic de Fon Forest Reserve, Guinea: a preliminary survey. *Bull. ABC* 11: 126–138.
- Dickinson, E. C. (ed.) 2004. *The Howard & Moore Complete Checklist of the Birds of the World*. Third edn. London, UK: Christopher Helm.
- Farabaugh, S. M. 1982. The ecological and social significance of duetting. In Kroodsma, D. E. & Miller, E. H. (eds.) *Acoustic Communication in Birds*. Vol. 2. New York: Academic Press.
- Gatter, W. 1997. *Birds of Liberia*. Robertsbridge: Pica Press.

- Gwynne-Jones, D. R. G., Mitchell, P. K., Harvey, M. E. & Swindell, K. 1978. *A New Geography of Sierra Leone*. Singapore: Longman.
- Irwin, M. P. S. 1997. Genera *Prinia*, *Schistolais* and *Apalis*. In Urban, E. K., Fry, C. H. & Keith, S. (eds.) *The Birds of Africa*. Vol. 5. London, UK: Academic Press.
- Langmore, N. E. 1998. Functions of duet and solo songs of female birds. *Trends Ecol. & Evol. Biol.* 13: 136–140.
- Morel, G. J. & Morel, M.-Y. 1988. Liste des oiseaux de Guinée. *Malimbus* 10: 143–176.
- Payne, R. B. 1971. Duetting and chorus singing in African birds. *Ostrich* Suppl. 9: 125–145.
- Sefc, K. M., Payne, R. B. & Sorenson, M. D. 2003. Phylogenetic relationships of African sunbird-like warblers: Moho (*Hypergerus atriceps*), Green Hylia (*Hylia prasina*) and Tit-hylia (*Pholidornis rufibia*). *Ostrich* 74: 8–17.
- Sibley, C. G. & Ahlquist, J. E. 1990. *Phylogeny and Classification of Birds: A Study in Molecular Evolution*. New Haven & London, UK: Yale University Press.
- Slater, P. J. B., Gil, D., Barlow, C. R. & Graves, J. A. 2002. Male-led duets in the Moho, *Hypergerus atriceps*, and Yellow-crowned Gonolek, *Laniarius barbarus*. *Ostrich* 73: 49–51.
- Smith, W. J. 1994. Animal duets: forcing a mate to be attentive. *J. Theor. Biol.* 166: 221–223.
- Thiollay, J.-M. 1985. The birds of Ivory Coast. *Malimbus* 7: 1–59.
- Urban, E. K., Fry, C. H. & Keith, S. (eds.) 1997. *The Birds of Africa*. Vol. 5. London, UK: Academic Press.
- White, C. M. N. 1962. A check list of the Ethiopian Muscicapidae (Sylviinae). Part II. *Occ. Pap. Natl. Mus. Southern Rhodesia* 26: 653–694.
- <sup>a</sup>*Birds of the Gambia, POB 279, Banjul, The Gambia.*
- <sup>b</sup>*Museum of Zoology and Department of Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, Michigan 48109, USA.*
- <sup>c</sup>*Department of Biology, Boston University, 5 Cummings Street, Boston, Massachusetts 02215, USA.*

Received 19 October 2004; revision accepted 19 July 2005

# Rockjumper Birding Tours

## The Best of African, Asian, & Malagasy Birding

Contact us for  
the most comprehensive selection  
of African birding tours

**Tour Destinations:** Angola; Botswana; Cameroon; Canary Islands; Cape Verde; Egypt & Petra; Ethiopia; Gabon; Ghana; Kenya; Madagascar; Malawi; Mauritius; Morocco; Namibia; Reunion; Rwanda; Sao Tome & Principe; Seychelles; Sierra Leone; South Africa; Tanzania; Tunisia; Uganda; Zambia. **Our Asian destinations include:** Bhutan; China; India; Malaysia & Borneo; Papua New Guinea; Philippines; Sri Lanka; Thailand.

**E-mail:** [info@rockjumper.co.za](mailto:info@rockjumper.co.za) **Website:** <http://www.rockjumper.co.za>  
**PO Box 13972, Cascades 3202, South Africa, Tel/fax: +27 333 471 234**

